

CLAIMS

1. A fuel injector constituted of a nozzle body and a solenoid valve attached to a nozzle holder and configured so that injection of fuel from the nozzle body is controlled by the solenoid valve, which fuel injector is characterized in that:

the solenoid valve comprises an electromagnet equipped with a magnetic pole, an armature bolt having a valve member attached at one end and formed at its other end with a head portion, a support/guide member for supporting and guiding the armature bolt to enable it to move toward and away from the magnetic pole, a spring member for spring-biasing the valve member in the direction of valve closing, a stopper member disposed opposite the head portion for limiting a maximum stroke of the valve member and an armature plate through which the armature bolt passes so as to locate it between the head portion and the valve member and which collaborates with the electromagnet to move the armature bolt toward the stopper member against the spring force of the spring member, the contact area between the armature plate and the head portion being larger than the contact area between the head portion and the stopper member.

2. A fuel injector as claimed in claim 1, wherein the stopper member is a cylindrical member installed in the magnetic pole and one end surface of the cylindrical member contacts the head portion to define the maximum displacement of the valve member in the valve opening direction.

3. A fuel injector as claimed in claim 2, wherein the cylindrical member is disposed in a cylindrical space formed in the magnetic pole.

4. A fuel injector as claimed in claim 3, wherein the spring member is a coil spring and the coil spring is disposed to be accommodated in the

cylindrical member.

5. A fuel injector as claimed in claim 1, further comprising an expansion coil of smaller force than the spring member, for pressing the armature plate into contact with the head portion.

6. A fuel injector as claimed in claim 5, wherein the expansion coil is provided between the armature plate and the support/guide member.

7. A fuel injector as claimed in claim 5, wherein the head portion is a plate member provided at one end of the armature bolt.

8. A fuel injector as claimed in claim 7, wherein a portion of the armature plate is adapted to press into contact with the plate member.